

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.: 10/808,166 Confirmation No.: 4837
Appellant(s): Singerle, Jr., Gregory J.
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Art Unit: 2457
Examiner: Rubin, Blake J.
Title: SYSTEM, METHOD AND COMPUTER PROGRAM PRODUCT FOR
AUTHENTICATING A CLIENT

Customer No.: 00826

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APPEAL BRIEF UNDER 37 CFR § 41.37

This Appeal Brief is filed pursuant to the "Notice of Appeal to the Board of Patent Appeals and Interferences," filed February 26, 2009, and the "Notice of Panel Decision from Pre-Appeal Brief Review," mailed March 17, 2009.

1. ***Real Party in Interest.***

The real party in interest in this appeal is Authenticatid LLC. The assignee of the above-referenced patent application is Authenticatid Corporation.

2. ***Related Appeals and Interferences.***

There are no related appeals and/or interferences involving this application or its subject matter.

3. ***Status of Claims.***

All of the pending claims, namely Claims 1-97, stand rejected and are the subject of the present appeal.

4. ***Status of Amendments.***

There are no unentered amendments in this application.

5. ***Summary of Claimed Subject Matter.***

The claimed invention will now be summarized with references to passages of the specification and drawings. It should be understood, however, that the references are provided solely for explanatory purposes, and should not otherwise in and of themselves be taken to limit the scope of the claimed invention.

Relative to FIGS. 1-5, for example, independent Claim 1 recites an apparatus **16** including a processor **28** configured to send, to a client **12**, a set of a plurality of labels identifying a respective plurality of elements **22** of an authentication matrix **20**. Pat. Appl., page 12, lines 15-24; page 14, line 29 – page 15, line 6; and FIG. 5, block **46**. The authentication matrix includes a plurality of elements organized in one or more columns and rows each of which includes a respective header **24**, where each element is identifiable by a label including a column header and row header that identifies the respective column and row of the element. *Id.* at page 9, line 1 – page 10, line 12. In this regard, the set of labels includes the column headers and row headers of the respective labels being unknown at the client until the set of labels is sent thereto. *Id.* at page 12, lines 15-24; and page 14, line 29 – page 15, line 6. As also recited, the processor is configured to receive a passcode from the client formulated based upon the elements identified by the set of labels, and configured to authenticate the client based upon the formulated passcode. *Id.* at page 12, line 25 – page 13, line 15; and page 15, lines 21-28; and FIG. 5, blocks **50-56**.

Depending from independent Claim 1, Claim 60 recites that the processor is configured to send a set of labels to the client in response to the client effectuating logging in. Pat. Appl., FIGS. 19 and 20. As recited, the logging in includes prompting the client for at least one piece of identifying information, and receiving the piece(s) of identifying information from the client. *Id.* As also recited, the piece(s) of identifying information include a user name and a password associated with a client user. *Id.*

Independent Claim 9 recites an apparatus **12** including a processor **28** configured to receive a set of a plurality of labels identifying a respective plurality of elements **22** of an authentication matrix **20**. Pat. Appl., page 12, lines 15-24; page 14, line 29 – page 15, line 6; and FIG. 5, block **46**. The authentication matrix includes a plurality of elements organized in one or more columns and rows each of which includes a respective header **24**, where each element is identifiable by a label including a column header and row header that identifies the respective column and row of the element. *Id.* at page 9, line 1 – page 10, line 12. In this regard, the set of labels includes the column headers and row headers of the respective labels being unknown at the apparatus until the set of labels is received by the processor. *Id.* at page 12, lines 15-24; and page 14, line 29 – page 15, line 6. As also recited, the processor is configured to formulate or receive a formulated passcode based upon the elements identified by the received set of labels to thereby enable authentication of the apparatus or a user of the apparatus based upon the formulated passcode. *Id.* at page 12, line 25 – page 13, line 15; and page 15, lines 21-28; and FIG. 5, blocks **50-56**.

Depending from independent Claim 9, Claim 62 recites that the processor is configured to receive a set of labels in response to the apparatus or user effectuating logging in. Pat. Appl., FIGS. 19 and 20. As recited, the logging in includes the apparatus or user being prompted for at least one piece of identifying information, and sending the piece(s) of identifying information. *Id.* As also recited, the piece(s) of identifying information include a user name and a password associated with the user. *Id.*

Independent Claim 17 recites a method of authenticating a client **12** including sending, to a client, a set of a plurality of labels identifying a respective plurality of elements **22** of an authentication matrix **20**. Pat. Appl., page 12, lines 15-24; page 14, line 29 – page 15, line 6; and FIG. 5, block **46**. The authentication matrix includes a plurality of elements organized in one or more columns and rows each of which includes a respective header **24**, where each element is identifiable by a label including a column header and row header that identifies the respective column and row of the element. *Id.* at page 9, line 1 – page 10, line 12. In this regard, the set of labels includes the column headers and row headers of the respective labels being unknown at the client until the set of labels is sent thereto. *Id.* at page 12, lines 15-24; and page 14, line 29 –

page 15, line 6. As also recited, the method includes receiving a passcode formulated based upon the elements identified by the received set of labels, and authenticating the client based upon the formulated passcode. *Id.* at page 12, line 25 – page 13, line 15; and page 15, lines 21-28; and FIG. 5, blocks **50-56**.

Depending from independent Claim 17, Claim 64 recites that sending a set of labels includes sending a set of labels in response to effectuating logging in. Pat. Appl., FIGS. 19 and 20. As recited, the logging in includes prompting the client for at least one piece of identifying information, and receiving the piece(s) of identifying information. *Id.* As also recited, the piece(s) of identifying information include a user name and a password associated with a client user. *Id.*

Independent Claim 25 recites a computer program product for authenticating a client **12**, where the computer program product includes at least one computer-readable storage medium having computer-readable program code portions stored therein. Pat. Appl., page 26, line 5 – page 27, line 5. As recited, the computer-readable program code portions include a first executable portion configured to send, to a client, a set of a plurality of labels identifying a respective plurality of elements **22** of an authentication matrix **20**. *Id.* at page 12, lines 15-24; page 14, line 29 – page 15, line 6; and FIG. 5, block **46**. The authentication matrix include a plurality of elements organized in one or more columns and rows each of which includes a respective header **24**, where each element is identifiable by a label including a column header and row header that identifies the respective column and row of the element. *Id.* at page 9, line 1 – page 10, line 12. In this regard, the set of labels include the column headers and row headers of the respective labels being unknown at the client until the set of labels is sent thereto. *Id.* at page 12, lines 15-24; and page 14, line 29 – page 15, line 6. As also recited, the computer-readable program code portions include a second executable portion configured to receive a passcode formulated based upon the elements identified by the received set of labels, and a third executable portion configured to authenticate the client based upon the formulated passcode. *Id.* at page 12, line 25 – page 13, line 15; and page 15, lines 21-28; and FIG. 5, blocks **50-56**.

Depending from independent Claim 25, Claim 66 recites that the first executable portion is configured to send a set of labels in response to effectuating logging in. Pat. Appl., FIGS. 19

and 20. As recited, the logging in includes prompting the client for at least one piece of identifying information, and receiving the piece(s) of identifying information. *Id.* As also recited, the piece(s) of identifying information include a user name and a password associated with a client user. *Id.*

Independent Claim 33 recites an apparatus 16 including a processor 28 configured to send, to a client 12, a set of a plurality of labels identifying a respective plurality of elements 22 of a matrix 20. Pat. Appl., page 12, lines 15-24; page 14, line 29 – page 15, line 6; and FIG. 5, block 46. The matrix includes a plurality of elements organized in one or more columns and rows each of which includes a respective header 24, where each element is identifiable by a label including a column header and a row header that identifies the respective column and row of the element. *Id.* at page 9, line 1 – page 10, line 12. In this regard, the set of labels includes the column headers and row headers of the respective labels being unknown at the client until the set of labels is sent thereto. *Id.* at page 12, lines 15-24; and page 14, line 29 – page 15, line 6. As also recited, the processor is configured to receive a response from the client formulated based upon the elements identified by the received set of labels. *Id.* at page 12, line 25 – page 13, line 15; and page 15, lines 21-28; and FIG. 5, blocks 50-56.

Depending from independent Claim 33, Claim 68 recites that the processor is configured to send a set of labels to the client in response to effectuating logging in. Pat. Appl., FIGS. 19 and 20. As recited, the logging in includes prompting the client for at least one piece of identifying information, and receiving the piece(s) of identifying information. *Id.* As also recited, the piece(s) of identifying information include a user name and a password associated with a client user. *Id.*

Independent Claim 42 recites an apparatus 12 including a processor 28 configured to receive a set of a plurality of labels identifying a respective plurality of elements 22 of a matrix 20. Pat. Appl., page 12, lines 15-24; page 14, line 29 – page 15, line 6; and FIG. 5, block 46. The matrix includes a plurality of elements organized in one or more columns and rows each of which includes a respective header 24, where each element is identifiable by a label including a column header and a row header that identifies the respective column and row of the element. *Id.* at page 9, line 1 – page 10, line 12. In this regard, the set of labels includes the column

headers and row headers of the respective labels being unknown at the apparatus until the set of labels is received by the processor. *Id.* at page 12, lines 15-24; and page 14, line 29 – page 15, line 6. As also recited, the client is configured to formulate or receive a formulated response based upon the elements identified by the received set of labels. *Id.* at page 12, line 25 – page 13, line 15; and page 15, lines 21-28; and FIG. 5, blocks 50-56.

Depending from independent Claim 42, Claim 70 recites that the processor is configured to receive a set of labels in response to effectuating logging in. Pat. Appl., FIGS. 19 and 20. As recited, the logging in includes the apparatus or user being prompted for at least one piece of identifying information, and sending the piece(s) of identifying information. *Id.* As also recited, the piece(s) of identifying information includes a user name and a password associated with the user. *Id.*

Independent Claim 51 recites a method that includes sending, to a client 12, a set of a plurality of labels identifying a respective plurality of elements 22 of a matrix 20. Pat. Appl., page 12, lines 15-24; page 14, line 29 – page 15, line 6; and FIG. 5, block 46. The matrix includes a plurality of elements organized in one or more columns and rows each of which includes a respective header 24, where each element is identifiable by a label including a column header and row header that identifies the respective column and row of the element. *Id.* at page 9, line 1 – page 10, line 12. In this regard, the set of labels includes the column headers and row headers of the respective labels being unknown at the client until the set of labels is sent thereto. *Id.* at page 12, lines 15-24; and page 14, line 29 – page 15, line 6. As also recited, the method includes receiving a response formulated based upon the elements identified by the received set of labels. *Id.* at page 12, line 25 – page 13, line 15; and page 15, lines 21-28; and FIG. 5, blocks 50-56.

Depending from independent Claim 51, Claim 72 recites sending a set of labels includes sending a set of labels in response to effectuating logging in. Pat. Appl., FIGS. 19 and 20. As recited, logging in includes prompting the client for at least one piece of identifying information, and receiving the piece(s) of identifying information. *Id.* As also recited, the piece(s) of identifying information include a user name and a password associated with a client user. *Id.*

Independent Claim 74 recites an apparatus including a processor **28** configured to prompt a user for at least one piece of identifying information associated with the user, where the user is prompted during effectuation of logging in. Pat. Appl., FIGS. 19 and 20. As recited, the processor is configured to receive the identifying information in response to prompting the user, where the processor receiving of the identifying information invokes an authentication procedure. *Id.*

As also recited by independent Claim 74, the authentication procedure includes selecting a set of labels identifying respective elements **22** of an authentication matrix **20**. Pat. Appl., page 12, lines 15-24; page 14, line 29 – page 15, line 6; and FIG. 5, block **46**. The authentication matrix includes a plurality of elements organized in one or more columns and rows each of which includes a respective header **24**, where each element is identifiable by a label including a column header and row header that identifies the respective column and row of the element. *Id.* at page 9, line 1 – page 10, line 12. The authentication procedure also includes providing the selected set of labels to the user, where the set of selected labels includes the column headers and row headers of the respective labels being unknown to the user until the set is provided. *Id.* at page 12, lines 15-24; and page 14, line 29 – page 15, line 6. The authentication procedure further includes receiving a passcode from the user in response to providing the set of labels, where the passcode has been formulated based upon the elements identified by the provided set of labels; and authenticating the user based upon the received passcode. *Id.* at page 12, line 25 – page 13, line 15; and page 15, lines 21-28; and FIG. 5, blocks **50-56**.

Depending from independent Claim 74, dependent Claim 81 recites that the identifying information received by the processor includes a user name and a password associated with the user. Pat. Appl., FIGS. 19 and 20.

Independent Claim 82 recites a method for authenticating a user including prompting a user for at least one piece of identifying information associated with the user, where the user is prompted during effectuation of logging in. Pat. Appl., FIGS. 19 and 20. As recited, the method also includes receiving the identifying information in response to prompting the user, where receiving of the identifying information invokes an authentication procedure. *Id.*

As also recited by independent Claim 82, the authentication procedure includes selecting a set of labels identifying respective elements **22** of an authentication matrix **20**. Pat. Appl., page 12, lines 15-24; page 14, line 29 – page 15, line 6; and FIG. 5, block **46**. The authentication matrix includes a plurality of elements organized in one or more columns and rows each of which includes a respective header **24**, where each element is identifiable by a label including a column header and row header that identifies the respective column and row of the element. *Id.* at page 9, line 1 – page 10, line 12. The authentication procedure also includes providing the selected set of labels to the user, where the set of selected labels includes the column headers and row headers of the respective labels being unknown to the user until the set is provided. *Id.* at page 12, lines 15-24; and page 14, line 29 – page 15, line 6. The authentication procedure further includes receiving a passcode from the user in response to providing the set of labels, where the passcode has been formulated based upon the elements identified by the provided set of labels; and authenticating the user based upon the received passcode. *Id.* at page 12, line 25 – page 13, line 15; and page 15, lines 21-28; and FIG. 5, blocks **50-56**.

Depending from independent Claim 82, Claim 89 recites that prompting a user comprises prompting a user for identifying information including a user name and a password associated with the user. Pat. Appl., FIGS. 19 and 20.

Independent Claim 90 recites a computer program product for authenticating a user, where the computer program product includes at least one computer-readable storage medium having computer-readable program code portions stored therein. Pat. Appl., page 26, line 5 – page 27, line 5. As recited, the computer-readable program code portions include a first executable portion configured to prompt a user for at least one piece of identifying information associated with the user, where the user is prompted during effectuation of logging in. *Id.* at FIGS. 19 and 20. The computer-readable program code portions also include a second executable portion configured to receive the identifying information in response to prompting the user, where the second executable portion receiving of the identifying information invokes an authentication procedure. *Id.*

As also recited by independent Claim 90, the authentication procedure includes selecting a set of labels identifying respective elements **22** of an authentication matrix **20**. Pat. Appl., page

12, lines 15-24; page 14, line 29 – page 15, line 6; and FIG. 5, block 46. The authentication matrix includes a plurality of elements organized in one or more columns and rows each of which includes a respective header 24, where each element is identifiable by a label including a column header and row header that identifies the respective column and row of the element. *Id.* at page 9, line 1 – page 10, line 12. The authentication procedure also includes providing the selected set of labels to the user, where the set of selected labels includes the column headers and row headers of the respective labels being unknown to the user until the set is provided. *Id.* at page 12, lines 15-24; and page 14, line 29 – page 15, line 6. The authentication procedure further includes receiving a passcode from the user in response to providing the set of labels, where the passcode has been formulated based upon the elements identified by the provided set of labels; and authenticating the user based upon the received passcode. *Id.* at page 12, line 25 – page 13, line 15; and page 15, lines 21-28; and FIG. 5, blocks 50-56.

Depending from independent Claim 90, Claim 97 recites that the first executable portion is configured to prompt a user for identifying information comprising a user name and a password associated with the user. Pat. Appl., FIGS. 19 and 20.

6. *Grounds of Rejection to be Reviewed on Appeal.*

All of the pending claims, namely Claims 1-97, stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application Publication No. 2002/0013904 to Gardner. This singular rejection of Claims 1-97 is the subject of this appeal.

7. *Argument.*

As indicated above, Claims 1-97 stand rejected being anticipated by Gardner. As explained below, Appellant submits that the claimed invention is patentably distinct from Gardner. In view of the remarks presented herein, Appellant respectfully requests reconsideration of the application and reversal of the rejection of all of the pending claims thereof.

A. Claims 1-73 are Patentable

According to one aspect of the claimed invention, as reflected by independent Claim 1, an apparatus is provided that includes a processor configured to send, to a client, a set of a plurality of labels identifying a respective plurality of elements of an authentication matrix. As recited, the authentication matrix includes a plurality of elements organized in one or more columns and rows each of which includes a respective header, each element being identifiable by a label including a column header and row header that identifies the respective column and row of the element. As also recited, the set of labels including the column headers and row headers of the respective labels is unknown at the client until the set of labels is sent thereto. The processor is configured to receive a passcode from the client formulated based upon the elements identified by the set of labels, and configured to authenticate the client based upon the formulated passcode.

As stated in the MPEP, anticipation of the claimed invention requires the cited reference to explicitly or inherently teach each and every element of the claimed invention. MPEP § 2131, citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). In contrast to independent Claim 1, Gardner does not expressly or inherently teach an apparatus for authenticating a client in which a set of labels including column and row headers identifying columns and rows of a matrix including elements from which a passcode is formulated are unknown at the client until that set is sent to the client. As previously explained, Gardner discloses a method of remote authentication for secure system access and payment systems, in which the method makes use of a variable PIN (VPIN) which may vary across different occasions of use. As disclosed, the VPIN (alleged passcode) may be derived from numbers or letters (alleged elements) that may be randomly generated and held in a matrix or grid (alleged authentication matrix) available to the user, where those numbers/letters may be identified by grid references (alleged labels). In every embodiment of Gardner, however, the user knows upfront the grid references identifying the numbers/letters from which the VPIN is derived. In fact, Gardner explicitly discloses that “these grid references may relate to such things as the Weekday, the Date, the Month, the Use number for that day, the Time of day to the last complete hour, or indeed any other method of precisely indicating which grid reference applies

to a particular and specific use.” Gardner, paragraph [0033] (emphasis added). The set labels including column and row headers of the matrix from which the passcode of independent Claim 1 is derived, on the other hand, are unknown at the client until sent thereto.

In FIGS. 3 and 4, Gardner discloses two embodiments of a grid or matrix. But only one of those grids, shown in FIG. 3 (reproduced below), includes headers that one could argue corresponds to column and row headers similar to independent Claim 1. See Gardner, FIG. 3; and paragraph [0055] (explaining that “individual characters constituting VPIN elements are identified by reference to column headings 32 and row labels 33”). The other grid, shown in FIG. 4 (reproduced below), does not include column headings 32 and row labels 33, and instead includes a singular reference for each of its series of letters or digits 31. See *id.*, FIG. 4; and paragraph [0069] (explaining that the letters or digits are “identified by a column heading locator reference 41 above each character”). Thus, at best, one could argue that the matrix of FIG. 3 of Gardner is similar to the authentication matrix of independent Claim 1.

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LOGO VPIN Code Card

ACCOUNT No. 873 251 XXX

32

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
623	270	593	893	237	512	489	286	352	580	242	792

31

0	1	2	3	4	5	6	7	8	9
X	892	327	194	482	792	495	582	309	836
1	570	193	578	513	280	126	482	193	573
2	731	392	712	503	248	492	391	369	759
3	351	482							

33

mpa27 3

Gardner, FIG. 3

20

LOGO

VPIN SYSTEM

Code card A/c No: 641232xxx

Fixed format: DP2P1MWP3

W WEEKDAY W

M T W T F S S

7s 3h 6q 0k 1c 4x 2m

P FIXED PIN INPUT each Weekday P

513 241 325 412 354 125 234

D DATE D

1 2 3 4 5 6 7 8 9 10

6a 7i 2p 4q 0z 1g 8s 3n 6u 2w

11 12 13 14 15 16 17 18 19 20

9f 0s 4x 8i 2f 1j 6r 6b 7e 3m

21 22 23 24 25 26 27 28 29 30i

4v 6d 9x 2y 0e 7i 1r 3d 8h 6q

M MONTH M

J F M A M J J A S O N D

5g 8d 1r 0k 2i 3x 6z 9f 4p 6e 2c 7a

T TIME T

00 03 06 09 11 13 15 17 19 21 24

7a 4s 2k 5q 8j 6p 0w 3x 1c 0e 4y

Gardner, FIG. 4

Gardner discloses two primary manners of authentication based on a VPIN derived from a grid, namely a non-interactive manner and an interactive manner, again, both of which include the user knowing upfront the column headings **32** and row labels **33** (column and row headers) identifying the numbers/letters from which a VPIN is derived. Indeed, the fact that the user knows upfront the grid references enables the non-interactive manner of authenticating that user. According to independent Claim 1, on the other hand, the set of labels including column and row headers are not known by the client until the labels are provided to the client.

In only the interactive manner of authentication are grid references sent to the user, similar to independent Claim 1 sending a set of labels to a client. In the interactive manner, Gardner may disclose particular numbers/letters identified by grid references and their order within a derived VPIN being unknown to the user until their selection by a master system. But even in this embodiment, the user still knows the column headings **32** and row labels **33** (column and row headers) from which those numbers/letters are selected. The client of independent Claim 1, on the other hand, does not know the set of labels including the column and row headers of the respective labels (the elements of which a passcode is formulated) ahead of being sent that set of labels. And at least due to the fact that the user knows upfront the column headings **32** and row labels **33** (column and row headers) enables the non-interactive manner of authenticating that user, Appellant respectfully submits that there is no apparent reason to modify Gardner to include this feature.

Appellant notes that the Examiner has proffered a “nested matrix” interpretation of Gardner in which each cell of Gardner’s grid is a “nested matrix” or “nested grid” including a single row and a number of “nested columns” corresponding to the number of numbers/letters in the respective cells. According to this interpretation, for the grid shown in FIG. 3, each cell includes a single row and three nested columns – one nested column for each of the three numbers (e.g., “489”) in the respective cell. As explained by the Examiner, then, in the interactive manner of authentication, the system may prompt the user for some but not all of the numbers/letters of a known cell; and as such, although a cell may be known to the user, the particular digits from the cell – and thus the corresponding nested columns – that are used to derive a VPIN may be unknown. That is, although a cell including the numbers “489” may be

known to the user, the system may only prompt the user for the third digit (i.e., “9”) and that this prompting, as opposed to prompting for all three digits or any of the other digits, is unknown to the user beforehand.

Even in the “nested matrix” interpretation of Gardner, however, the user does know the row (or row label 33) of the matrix before being prompted for the VPIN. According to independent Claim 1, on the other hand, matrix labels including both column and row headers are unknown before the client receives those labels. As in the non-interactive embodiment, in the interactive embodiment of Gardner, the cell of Gardner’s matrix is known to the user as it is pinpointed, for example, by the current date or time. Even given an unknown “nested column header” interpretation of Gardner as suggested, Gardner does not also have an unknown “nested row label.” The claimed invention, which does not base cell selection on information known to the user outside of the authentication scheme, recites that labels including both column and row headers are unknown before their receipt by the user.

Appellant notes that the aforementioned remarks as to the “nested matrix” interpretation were presented to the Examiner by Appellant’s representative during a telephone interview with the Examiner on January 15, 2009. In response, the Examiner suggested that Gardner could be interpreted such that each section of time on Gardner’s matrix could be interpreted as a separate row. According to this interpretation, with respect to FIG. 4, Gardner’s matrix includes a separate row for the weekday, date, month and time; each section of time corresponding to a separate row. And under this interpretation, the Examiner further suggested that in the interactive manner of authentication, the system may prompt the user for letters/numbers from some but not all of the sections of time (i.e., rows). Thus as argued by the Examiner, although the sections of time may be known to the user, the sections – and thus the corresponding rows – that are used to derive a VPIN may be unknown. That is, although the particular row for each of the weekday, date, month and time may be known to the user, the system may only prompt the user for digits from the weekday and month sections (rows) and that this prompting, as opposed to prompting for digits from all of the sections (and hence rows) or any of the other sections, is unknown to the user beforehand.

Contrary to the aforementioned, Appellant respectfully submits that Gardner does not explicitly disclose that a user may be prompted for digits for some sections of time but not others, and that the sections from which the user is prompted for digits are unknown to the user before being received, similar to independent Claim 1 reciting that matrix labels including both column and row headers are unknown before being received. More particularly, Gardner does not explicitly disclose a user having a VPIN code card having multiple sections for different measures of time, but is prompted for digits from some but not all of those sections. In all disclosed embodiments of Gardner implementing the interactive manner of authentication, the user is prompted for digits from all of the sections of time present on its VPIN code card.

Not only does Gardner not explicitly disclose the aforementioned feature, but Gardner also does not inherently disclose the feature of independent Claim 1. Appellant notes that to establish inherency, evidence must make clear that the missing descriptive matter is necessarily present in the prior art, and would be recognized as being present in the prior art by those skilled in the art. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (citing *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991)). “Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *Id.* (citing *Continental Can Co.*, 948 F.2d at 1269) (emphasis added). In the instant case, Gardner does not necessarily, if not explicitly, disclose the aforementioned feature of independent Claim 1.

Appellant acknowledges that Gardner illustrates a time section in its VPIN code card of FIG. 4 and that in its disclosed example 2 relative to that code card, Gardner does not disclose its user being prompted for a digit from that section. But as expressly disclosed by Gardner, “time of authentication is featured on the VPIN Code Card in FIG. 4 but not further illustrated.” Gardner, paragraph [0069]. Thus, even given the lack of explicit disclosure of the user not being prompted for digits from a time section of a VPIN code card, Gardner does not necessarily (inherently) disclose that the sections (rows) from the card from which the user is being prompted for digits are unknown to the user until being prompted, similar to the matrix labels of independent Claim 1.

Appellant therefore respectfully submits that independent Claim 1, and by dependency Claims 2-8, 60 and 61, is patentably distinct from Gardner. Independent Claims 9, 17, 25, 33, 42 and 51 include subject matter similar to that of independent Claim 1, including a set of labels including columns/rows of a matrix including elements from which a passcode is formulated are unknown at the client until that set is sent to or received by the client. Thus, Appellant also respectfully submits that independent Claims 9, 17, 25, 33, 42 and 51, and by dependency Claims 10-16, 18-24, 26-32, 34-41, 43-50, 52-59 and 62-73, are also patentably distinct from Gardner, for at least the reasons given above with respect to independent Claim 1.

I. Dependent Claims

In addition to the above reasons, Appellant respectfully submits that various ones of dependent Claims 2-8, 10-16, 18-24, 26-32, 34-41, 43-50 and 52-73 recite features further patentably distinct from Gardner. For example, dependent Claim 60 (and similarly Claims 62, 64, 66, 68, 70 and 72) recites that the processor is configured to send a set of labels to the client in response to the client effectuating logging in, where the logging in includes prompting the client for at least one piece of identifying information, and receiving the piece(s) of identifying information from the client. As recited, the piece(s) of identifying information include a user name and a password associated with a client user. This feature is also absent from Gardner.

For the aforementioned feature of the claimed invention, the final Official Action cites paragraphs [0041] and [0042] of Gardner in which Gardner discloses a method of registering a user to use the disclosed VPIN system. As disclosed, Gardner's method of registering a user includes the user supplying a master system with requested information including a name, address, proof of identity and a fixed personal identification number (PIN). However, Gardner does not explicitly or inherently disclose its user providing any identifying information as part of the user effectuating logging in to the master system or any other system, or that the user's identifying information includes a username and password. And Gardner does not explicitly or inherently disclose that its master system responds to any user logging in or other user registration by sending column headers and row labels, similar to dependent Claim 60 (and

similarly Claims 62, 64, 66, 68, 70 and 72) responding to the client effectuating logging in by sending a set of labels to the client.

Appellant notes that one may argue that the PIN of Gardner corresponds to a password. But even given this interpretation, Gardner does not teach or suggest that its PIN is provided as part of a logging in to which its system is responsive to authenticate a user, similar to the claimed invention. Instead, as per Gardner, its PIN is provided as part of the authentication itself, the PIN being included as part of Gardner's VPIN.

B. Claims 74-97 are Patentable

According to another aspect of the claimed invention, as reflected by independent Claim 74, an apparatus is provided that includes a processor configured to prompt a user for at least one piece of identifying information associated with the user, where the user is prompted during effectuation of logging in. As recited, the processor is configured to receive the identifying information in response to prompting the user, where the processor receiving of the identifying information invokes an authentication procedure. The authentication procedure includes selecting a set of labels identifying respective elements of an authentication matrix. The authentication matrix includes a plurality of elements organized in one or more columns and rows each of which includes a respective header, where each element is identifiable by a label including a column header and row header that identifies the respective column and row of the element. The authentication procedure also includes providing the selected set of labels to the user, where the set of selected labels includes the column headers and row headers of the respective labels being unknown to the user until the set is provided. Further, the authentication procedure includes receiving a passcode from the user in response to providing the set of labels, where the passcode has been formulated based upon the elements identified by the provided set of labels; and authenticating the user based upon the received passcode.

As explained above with respect to independent Claim 1, in contrast to independent Claim 74, Gardner does not expressly or inherently teach an apparatus for authenticating a client in which a set of labels are provided to a user, where the labels include column and row headers identifying columns and rows of a matrix are unknown at the client until that set is provided to

the user. In further contrast to independent Claim 74, Gardner does not teach or suggest prompting a user for identifying information during effectuation of logging in, where receipt of the identifying information invokes the authentication procedure by which the set of labels are provided to the user.

For the logging in feature of the claimed invention, the final Official Action again cites paragraphs [0041] and [0042] of Gardner. As explained above with respect to dependent Claim 60, Gardner's method of registering a user includes the user supplying a master system with requested information including a name, address, proof of identity and a fixed personal identification number (PIN). However, Gardner does not explicitly or inherently disclose its user providing any identifying information as part of the user effectuating logging in to the master system or any other system. And Gardner does not explicitly or inherently disclose that the user providing its identifying information invokes the authentication procedure, similar to independent Claim 74. Instead, the user's registration merely enables a subsequent user authentication.

Appellant therefore respectfully submits that independent Claim 74, and by dependency Claims 75-81, is patentably distinct from Gardner. Independent Claims 82 and 90 include subject matter similar to that of independent Claim 1, including the recited logging in and authentication procedure. Thus, Appellant also respectfully submits that independent Claims 82 and 90, and by dependency Claims 83-89 and 91-97, are also patentably distinct from Gardner, for at least the reasons given above with respect to independent Claim 74.

1. Dependent Claims

In addition to the above reasons, Appellant respectfully submits that various ones of dependent Claims 83-89 and 91-97 recite features further patentably distinct from Gardner. For example, dependent Claim 81 (and similarly Claims 89 and 97) recites that the identifying information received by the processor comprises a user name and a password associated with the user. This feature is also absent from Gardner.

For the aforementioned feature of the claimed invention, the final Official Action cites paragraphs [0041] and [0042] of Gardner in which Gardner discloses a method of registering a

user to use the disclosed VPIN system. As disclosed, Gardner's method of registering a user includes the user supplying a master system with requested information including a name, address, proof of identity and a fixed personal identification number (PIN). However, Gardner does not explicitly or inherently disclose that the user's identifying information includes a username and password. Appellant notes that one may argue that the PIN of Gardner corresponds to a password. But even given this interpretation, Gardner does not teach or suggest that its PIN is provided as part of a logging in to which its system is responsive to authenticate a user, similar to the claimed invention. Instead, as per Gardner, its PIN is provided as part of the authentication itself, the PIN being included as part of Gardner's VPIN.

8. ***Claims Appendix.***

The claims subject to this appeal are as follows:

1. (Previously Presented) An apparatus comprising:

a processor configured to send, to a client, a set of a plurality of labels identifying a respective plurality of elements of an authentication matrix, the authentication matrix including a plurality of elements organized in one or more columns and rows each of which includes a respective header, each element being identifiable by a label including a column header and row header that identifies the respective column and row of the element, the set of labels including the column headers and row headers of the respective labels being unknown at the client until the set of labels is sent thereto,

wherein the processor is configured to receive a passcode from the client formulated based upon the elements identified by the set of labels, and wherein the processor is configured to authenticate the client based upon the formulated passcode.

2. (Previously Presented) An apparatus according to Claim 1, wherein the processor is configured to send a set of labels, receive a formulated passcode and authenticate the client a plurality of times, and wherein the processor is configured to send each set of labels such that the sent set of labels differs from each previously sent set of labels.

3. (Previously Presented) An apparatus according to Claim 1, wherein the processor is configured to generate a passcode based upon elements selected from the authentication matrix, wherein the processor is configured to send a set of labels identifying the selected elements, and wherein the processor is configured to authenticate the client further based upon the generated passcode.

4. (Previously Presented) An apparatus according to Claim 3, wherein the processor is configured to provide, to the client, an authentication matrix stored in a database, wherein the processor is configured to generate a passcode based upon elements selected from the

authentication matrix stored in the database, and wherein the processor is configured to receive a passcode formulated based upon elements of the authentication matrix provided to the client corresponding to the elements selected from the authentication matrix stored in the database.

5. (Previously Presented) An apparatus according to Claim 4, wherein the database is configured to store a plurality of authentication matrices, each authentication matrix associated with a different client, wherein the processor is configured to provide, to the client being authenticated, an authentication matrix associated with the respective client, and wherein the processor is configured to generate a passcode based upon elements selected from the authentication matrix stored in the database and associated with the respective client.

6. (Previously Presented) An apparatus according to Claim 5, wherein the processor is configured to receive at least one piece of identifying information associated with the client being authenticated, and thereafter identify, from the plurality of authentication matrices stored in the database, the authentication matrix associated with the client being authenticated based upon the at least one piece of identifying information, and wherein the processor is configured to generate a passcode based upon elements selected from the identified authentication matrix.

7. (Previously Presented) An apparatus according to Claim 3, wherein the processor is configured to generate a passcode further based upon a personal identification number (PIN) associated with the client, and wherein the processor is configured to receive a passcode formulated further based upon the PIN.

8. (Previously Presented) An apparatus according to Claim 7, wherein the processor is configured to generate a passcode including elements selected from the authentication matrix and the PIN in a variable position with respect to the selected elements, wherein the processor is configured to receive a passcode formulated to include the identified elements and the PIN in the variable position with respect to the identified elements, and wherein the processor being

configured to authenticate the client by identifying a match between the generated passcode and the formulated passcode.

9. (Previously Presented) An apparatus comprising:

a processor configured to receive a set of a plurality of labels identifying a respective plurality of elements of an authentication matrix, the authentication matrix including a plurality of elements organized in one or more columns and rows each of which includes a respective header, each element being identifiable by a label including a column header and row header that identifies the respective column and row of the element, the set of labels including the column headers and row headers of the respective labels being unknown at the apparatus until the set of labels is received by the processor,

wherein the processor is configured to formulate or receive a formulated passcode based upon the elements identified by the received set of labels to thereby enable authentication of the apparatus or a user of the apparatus based upon the formulated passcode.

10. (Previously Presented) An apparatus according to Claim 9, wherein the processor is configured to receive the set of labels and formulate or receive a formulated passcode a plurality of times to thereby enable authentication of the apparatus or user a plurality of times, and wherein each set of labels received by the processor differs from each set of labels previously received by the processor.

11. (Previously Presented) An apparatus according to Claim 9, wherein the processor is configured to receive a set of labels identifying elements selected from the authentication matrix during generation of a passcode, and wherein the processor is configured to formulate or receive the formulated passcode to thereby enable authentication of the apparatus or user further based upon the generated passcode.

12. (Previously Presented) An apparatus according to Claim 11, wherein an authentication matrix is configured for provision to the apparatus or user from an authenticator

configured to store an authentication matrix, wherein the processor is configured to receive a set of labels identifying elements selected from the authentication matrix stored by the authenticator, and wherein the processor is configured to formulate or receive a formulated passcode based upon elements of the authentication matrix provided to the apparatus or user corresponding to the elements selected from the authentication matrix stored by the authenticator.

13. (Previously Presented) An apparatus according to Claim 12, wherein the authentication matrix configured for provision to the apparatus or user is associated with the respective apparatus or user, the respective authentication matrix being configured for provision from an authenticator configured to store a plurality of authentication matrices, each authentication matrix associated with a different apparatus or user, and wherein the processor is configured to receive a set of labels identifying elements selected from the authentication matrix stored by the authenticator and associated with the respective apparatus or user.

14. (Previously Presented) An apparatus according to Claim 13, wherein the processor is configured to send the authenticator at least one piece of identifying information associated with the respective apparatus or user to thereby enable the authenticator to identify, from the plurality of authentication matrices, the authentication matrix associated with the respective apparatus or user based upon the at least one piece of identifying information, and wherein the processor is configured to receive a set of labels identifying elements selected from the identified authentication matrix.

15. (Previously Presented) An apparatus according to Claim 11, wherein the processor is configured to receive a set of labels identifying elements selected from the authentication matrix during generation of a passcode based upon a personal identification number (PIN) associated with the processor, and wherein the processor is configured to formulate or receive a formulated passcode further based upon the PIN.

16. (Previously Presented) An apparatus according to Claim 15, wherein the processor is configured to receive a set of labels identifying elements selected from the authentication matrix during generation of a passcode including elements selected from the authentication matrix and the PIN in a variable position with respect to the selected elements, wherein the processor is configured to formulate or receive a formulated passcode including the identified elements and the PIN in the variable position with respect to the identified elements to thereby enable authentication of the apparatus or user by identifying a match between the generated passcode and the formulated passcode.

17. (Previously Presented) A method of authenticating a client comprising:
sending, to a client, a set of a plurality of labels identifying a respective plurality of elements of an authentication matrix, the authentication matrix including a plurality of elements organized in one or more columns and rows each of which includes a respective header, each element being identifiable by a label including a column header and row header that identifies the respective column and row of the element, the set of labels including the column headers and row headers of the respective labels being unknown at the client until the set of labels is sent thereto;

receiving a passcode formulated based upon the elements identified by the received set of labels; and

authenticating the client based upon the formulated passcode.

18. (Previously Presented) A method according to Claim 17, wherein sending a set of labels, receiving a passcode and authenticating the client occur a plurality of times, and wherein each sent set of labels differs from each previously sent set of labels.

19. (Previously Presented) A method according to Claim 17 further comprising:
generating a passcode based upon elements selected from the authentication matrix,
wherein sending a set of labels comprises sending a set of labels identifying the selected elements, and

wherein authenticating the client comprises authenticating the client further based upon the generated passcode.

20. (Previously Presented) A method according to Claim 19 further comprising:
providing an authentication matrix to an authenticator, and providing an authentication matrix to the client,

wherein generating a passcode comprises generating a passcode based upon elements selected from the authentication matrix provided to the authenticator, and

wherein receiving a passcode comprises receiving a passcode formulated based upon elements of the authentication matrix provided to the client corresponding to the elements selected from the authentication matrix provided to the authenticator.

21. (Previously Presented) A method according to Claim 20, wherein providing an authentication matrix to an authenticator comprises providing a plurality of authentication matrices to an authenticator, each authentication matrix associated with a different client, wherein providing an authentication matrix to the client comprises providing, to the client being authenticated, an authentication matrix associated with the respective client, and

wherein generating a passcode comprises generating a passcode based upon elements selected from the authentication matrix provided to the authenticator and associated with the respective client.

22. (Previously Presented) A method according to Claim 21 further comprising:
receiving at least one piece of identifying information associated with the client being authenticated; and

identifying, from the plurality of authentication matrices, the authentication matrix associated with the client being authenticated based upon the at least one piece of identifying information,

wherein generating a passcode comprises generating a passcode based upon elements selected from the identified authentication matrix.

23. (Previously Presented) A method according to Claim 19, wherein generating a passcode comprises generating a passcode further based upon a personal identification number (PIN) associated with the client, and wherein receiving a passcode comprises receiving a passcode formulated further based upon the PIN.

24. (Previously Presented) A method according to Claim 23, wherein generating a passcode comprises generating a passcode including elements selected from the authentication matrix and the PIN in a variable position with respect to the selected elements, wherein receiving a passcode comprises receiving a passcode formulated to include the identified elements and the PIN in the variable position with respect to the identified elements, and wherein authenticating the client comprises identifying a match between the generated passcode and the formulated passcode.

25. (Previously Presented) A computer program product for authenticating a client, the computer program product comprising at least one computer-readable storage medium having computer-readable program code portions stored therein, the computer-readable program code portions comprising:

a first executable portion configured to send, to a client, a set of a plurality of labels identifying a respective plurality of elements of an authentication matrix, the authentication matrix including a plurality of elements organized in one or more columns and rows each of which includes a respective header, each element being identifiable by a label including a column header and row header that identifies the respective column and row of the element, the set of labels including the column headers and row headers of the respective labels being unknown at the client until the set of labels is sent thereto;

a second executable portion configured to receive a passcode formulated based upon the elements identified by the received set of labels; and

a third executable portion configured to authenticate the client based upon the formulated passcode.

26. (Previously Presented) A computer program product according to Claim 25, wherein the first, second and third executable portions are configured to send a set of labels, receive a passcode and authenticate the client, respectively, a plurality of times, and wherein each set of labels sent by the first executable portion differs from each set of labels previously sent by the first executable portion.

27. (Previously Presented) A computer program product according to Claim 25, wherein the computer-readable program code portions further comprise:

a fourth executable portion configured to generate a passcode based upon elements selected from the authentication matrix,

wherein the first executable portion is configured to send a set of labels identifying the selected elements, and

wherein the third executable portion is configured to authenticate the client further based upon the generated passcode.

28. (Previously Presented) A computer program product according to Claim 27, wherein the computer-readable program code portions further comprise:

a fifth executable portion configured to provide an authentication matrix to an authenticator, and provide an authentication matrix to the client,

wherein the fourth executable portion is configured to generate a passcode based upon elements selected from the authentication matrix provided to the authenticator, and

wherein the second executable portion is configured to receive a passcode formulated based upon elements of the authentication matrix provided to the client corresponding to the elements selected from the authentication matrix provided to the authenticator.

29. (Previously Presented) A computer program product according to Claim 28, wherein the fifth executable portion is configured to provide a plurality of authentication matrices to the authenticator, each authentication matrix associated with a different client,

wherein the fifth executable portion is also configured to provide, to the client being authenticated, an authentication matrix associated with the respective client, and

wherein the fourth executable portion is configured to generate a passcode based upon elements selected from the authentication matrix provided to the authenticator and associated with the respective client.

30. (Previously Presented) A computer program product according to Claim 29, wherein the computer-readable program code portions further comprise:

a sixth executable portion configured to receive at least one piece of identifying information associated with the client being authenticated; and

a seventh executable portion configured to identify, from the plurality of authentication matrices, the authentication matrix associated with the client being authenticated based upon the at least one piece of identifying information,

wherein the fourth executable portion is configured to generate a passcode based upon elements selected from the identified authentication matrix.

31. (Previously Presented) A computer program product according to Claim 27, wherein the fourth executable portion is configured to generate a passcode further based upon a personal identification number (PIN) associated with the client, and wherein the second executable portion is configured to receive a passcode formulated further based upon the PIN.

32. (Previously Presented) A computer program product according to Claim 31, wherein the fourth executable portion is adapted to generate a passcode including elements selected from the authentication matrix and the PIN in a variable position with respect to the selected elements, wherein the second executable portion is configured to receive a passcode formulated to include the identified elements and the PIN in the variable position with respect to the identified elements, and wherein the third executable portion is configured to authenticate the client by identifying a match between the generated passcode and the formulated passcode.

33. (Previously Presented) An apparatus comprising:

a processor configured to send, to a client, a set of a plurality of labels identifying a respective plurality of elements of a matrix, the matrix including a plurality of elements organized in one or more columns and rows each of which includes a respective header, each element being identifiable by a label including a column header and a row header that identifies the respective column and row of the element, the set of labels including the column headers and row headers of the respective labels being unknown at the client until the set of labels is sent thereto, and wherein the processor is configured to receive a response from the client formulated based upon the elements identified by the received set of labels.

34. (Previously Presented) An apparatus according to Claim 33, wherein the processor is configured to send a set of labels, and receive a formulated response a plurality of times, and wherein the processor is configured to send each set of labels such that the sent set of labels differs from each previously sent set of labels.

35. (Previously Presented) An apparatus according to Claim 33, wherein the matrix comprises an authentication matrix, wherein the processor is configured to receive a response comprising a formulated passcode, and wherein the processor is configured to authenticate the client based upon the formulated passcode.

36. (Previously Presented) An apparatus according to Claim 35, wherein the processor is configured to generate a passcode based upon elements selected from the authentication matrix, wherein the processor is configured to send a set of labels identifying the selected elements, and wherein the processor is configured to authenticate the client further based upon the generated passcode.

37. (Previously Presented) An apparatus according to Claim 36, wherein the processor is capable of providing, to the client, an authentication matrix stored in a database, wherein the processor is configured to generate a passcode based upon elements selected from

the authentication matrix stored in the database, and wherein the processor is configured to receive a passcode formulated based upon elements of the authentication matrix provided to the client corresponding to the elements selected from the authentication matrix stored in the database.

38. (Previously Presented) An apparatus according to Claim 37, wherein the database is configured to store a plurality of authentication matrices, each authentication matrix associated with a different client, wherein the processor is configured to provide, to the client being authenticated, an authentication matrix associated with the respective client, and wherein the processor is configured to generate a passcode based upon elements selected from the authentication matrix stored in the database and associated with the respective client.

39. (Previously Presented) An apparatus according to Claim 38, wherein the processor is configured to receive at least one piece of identifying information associated with the client being authenticated, and thereafter identify, from the plurality of authentication matrices stored in the database, the authentication matrix associated with the client being authenticated based upon the at least one piece of identifying information, and wherein the processor is configured to generate a passcode based upon elements selected from the identified authentication matrix.

40. (Previously Presented) An apparatus according to Claim 36, wherein the processor is configured to generate a passcode further based upon a personal identification number (PIN) associated with the client, and wherein the processor is configured to receive a passcode formulated further based upon the PIN.

41. (Previously Presented) An apparatus according to Claim 40, wherein the processor is configured to generate a passcode including elements selected from the authentication matrix and the PIN in a variable position with respect to the selected elements, wherein the processor is configured to receive a passcode formulated to include the identified

elements and the PIN in the variable position with respect to the identified elements, and wherein the processor is configured to authenticate the client by identifying a match between the generated passcode and the formulated passcode.

42. (Previously Presented) An apparatus comprising:

a processor configured to receive a set of a plurality of labels identifying a respective plurality of elements of a matrix, the matrix including a plurality of elements organized in one or more columns and rows each of which includes a respective header, each element being identifiable by a label including a column header and a row header that identifies the respective column and row of the element, the set of labels including the column headers and row headers of the respective labels being unknown at the apparatus until the set of labels is received by the processor, wherein the client is configured to formulate or receive a formulated response based upon the elements identified by the received set of labels.

43. (Previously Presented) An apparatus according to Claim 42, wherein the processor is configured to receive the set of labels and formulating a response a plurality of times, and wherein each set of labels received by the processor differs from each set of labels previously received by the processor.

44. (Previously Presented) An apparatus according to Claim 42, wherein the processor is configured to receive the set of labels identifying elements of an authentication matrix, and wherein the processor is configured to formulate or receive a formulated response comprising a passcode to thereby enable authentication of the apparatus or a user of the apparatus based upon the formulated passcode.

45. (Previously Presented) An apparatus according to Claim 42, wherein the processor is configured to receive a set of labels identifying elements selected from the authentication matrix during generation of a passcode, and wherein the processor is configured to

formulate or receive the formulated passcode to thereby enable authentication of the apparatus or user further based upon the generated passcode.

46. (Previously Presented) An apparatus according to Claim 45, wherein an authentication matrix is configured for provision to the apparatus or user from an authenticator configured to store an authentication matrix, wherein the processor is configured to receive a set of labels identifying elements selected from the authentication matrix stored by the authenticator, and wherein the processor is configured to formulate or receive a formulated passcode based upon elements of the authentication matrix provided to the apparatus or user corresponding to the elements selected from the authentication matrix stored by the authenticator.

47. (Previously Presented) An apparatus according to Claim 46, wherein the authentication matrix configured for provision to the apparatus or user is associated with the respective apparatus or user, the respective authentication matrix being configured for provision from an authenticator configured to store a plurality of authentication matrices, each authentication matrix associated with a different apparatus or user, and wherein the processor is configured to receive a set of labels identifying elements selected from the authentication matrix stored by the authenticator and associated with the respective apparatus or user.

48. (Previously Presented) An apparatus according to Claim 47, wherein the processor is configured to send the authenticator at least one piece of identifying information associated with the respective apparatus or user to thereby enable the authenticator to identify, from the plurality of authentication matrices, the authentication matrix associated with the respective apparatus or user based upon the at least one piece of identifying information, and wherein the processor is configured to receive a set of labels identifying elements selected from the identified authentication matrix.

49. (Previously Presented) An apparatus according to Claim 45, wherein the processor is configured to receive a set of labels identifying elements selected from the

authentication matrix during generation of a passcode based upon a personal identification number (PIN) associated with the apparatus or user, and wherein the processor is configured to formulate or receive a formulated passcode further based upon the PIN.

50. (Previously Presented) An apparatus according to Claim 49, wherein the processor is configured to receive a set of labels identifying elements selected from the authentication matrix during generation of a passcode including elements selected from the authentication matrix and the PIN in a variable position with respect to the selected elements, wherein the processor is configured to formulate or receive a formulated passcode including the identified elements and the PIN in the variable position with respect to the identified elements to thereby enable authentication of the apparatus or user by identifying a match between the generated passcode and the formulated passcode.

51. (Previously Presented) A method comprising:
sending, to a client, a set of a plurality of labels identifying a respective plurality of elements of a matrix, the matrix including a plurality of elements organized in one or more columns and rows each of which includes a respective header, each element being identifiable by a label including a column header and row header that identifies the respective column and row of the element, the set of labels including the column headers and row headers of the respective labels being unknown at the client until the set of labels is sent thereto; and
receiving a response formulated based upon the elements identified by the received set of labels.

52. (Previously Presented) A method according to Claim 51, wherein sending a set of labels and receiving a response occur a plurality of times, and wherein each received set of labels differs from each previously received set of labels.

53. (Previously Presented) A method according to Claim 51, wherein sending a set of labels comprises sending a set of labels identifying elements of an authentication matrix, wherein

receiving a response comprises receiving a formulated passcode, and wherein the method further comprises:

authenticating the client based upon the formulated passcode.

54. (Previously Presented) A method according to Claim 53 further comprising:
generating a passcode based upon elements selected from the authentication matrix,
wherein sending a set of labels comprises receiving a set of labels identifying the selected
elements, and

wherein authenticating the client comprises authenticating the client further based upon
the generated passcode.

55. (Previously Presented) A method according to Claim 54 further comprising:
providing an authentication matrix to an authenticator, and providing an authentication
matrix to the client,

wherein generating a passcode comprises generating a passcode based upon elements
selected from the authentication matrix provided to the authenticator, and

wherein receiving a passcode comprises receiving a passcode formulated based upon
elements of the authentication matrix provided to the client corresponding to the elements
selected from the authentication matrix provided to the authenticator.

56. (Previously Presented) A method according to Claim 55, wherein providing an
authentication matrix to an authenticator comprises providing a plurality of authentication
matrices to an authenticator, each authentication matrix associated with a different client,
wherein providing an authentication matrix to the client comprises providing, to the client being
authenticated, an authentication matrix associated with the respective client, and

wherein generating a passcode comprises generating a passcode based upon elements
selected from the authentication matrix provided to the authenticator and associated with the
respective client.

57. (Previously Presented) A method according to Claim 56 further comprising:
receiving at least one piece of identifying information associated with the client being
authenticated; and

identifying, from the plurality of authentication matrices, the authentication matrix
associated with the client being authenticated based upon the at least one piece of identifying
information,

wherein generating a passcode comprises generating a passcode based upon elements
selected from the identified authentication matrix.

58. (Previously Presented) A method according to Claim 54, wherein generating a
passcode comprises generating a passcode further based upon a personal identification number
(PIN) associated with the client, and wherein receiving a passcode comprises receiving a
passcode formulated further based upon the PIN.

59. (Previously Presented) A method according to Claim 58, wherein generating a
passcode comprises generating a passcode including elements selected from the authentication
matrix and the PIN in a variable position with respect to the selected elements, wherein receiving
a passcode comprises receiving a passcode formulated to include the identified elements and the
PIN in the variable position with respect to the identified elements, and wherein authenticating
the client comprises identifying a match between the generated passcode and the formulated
passcode.

60. (Previously Presented) An apparatus according to Claim 1, wherein the processor
is configured to send a set of labels to the client in response to the client effectuating logging in,
logging in including prompting the client for at least one piece of identifying information, and
receiving the at least one piece of identifying information from the client, the at least one piece
of identifying information comprising a user name and a password associated with a client user.

61. (Previously Presented) An apparatus according to Claim 6, wherein the at least one piece of identifying information received by the processor is capable of identifying the client to an organization independent of the authentication matrix associated with the client.

62. (Previously Presented) An apparatus according to Claim 9, wherein the processor is configured to receive a set of labels in response to the apparatus or user effectuating logging in, logging in including the apparatus or user being prompted for at least one piece of identifying information, and sending the at least one piece of identifying information, the at least one piece of identifying information comprising a user name and a password associated with the user.

63. (Previously Presented) An apparatus according to Claim 14, wherein the at least one piece of identifying information sent by the processor is capable of identifying the apparatus or user to an organization independent of the authentication matrix associated with the respective apparatus or user.

64. (Previously Presented) A method according to Claim 17, wherein sending a set of labels comprises sending a set of labels in response to effectuating logging in, logging in including prompting the client for at least one piece of identifying information, and receiving the at least one piece of identifying information, the at least one piece of identifying information comprising a user name and a password associated with a client user.

65. (Previously Presented) A method according to Claim 22, wherein receiving at least one piece of identifying information comprises receiving at least one piece of identifying information capable of identifying the client to an organization independent of the authentication matrix associated with the client.

66. (Previously Presented) A computer program product according to Claim 25, wherein the first executable portion is configured to send a set of labels in response to effectuating logging in, logging in including prompting the client for at least one piece of

identifying information, and receiving the at least one piece of identifying information, the at least one piece of identifying information comprising a user name and a password associated with a client user.

67. (Previously Presented) A computer program product according to Claim 30, wherein the at least one piece of identifying information received by the sixth executable portion is capable of identifying the client to an organization independent of the authentication matrix associated with the client.

68. (Previously Presented) An apparatus according to Claim 33, wherein the processor is configured to send a set of labels to the client in response to effectuating logging in, logging in including prompting the client for at least one piece of identifying information, and receiving the at least one piece of identifying information, the at least one piece of identifying information comprising a user name and a password associated with a client user.

69. (Previously Presented) An apparatus according to Claim 39, wherein the at least one piece of identifying information received by the processor is capable of identifying the client to an organization independent of the authentication matrix associated with the client.

70. (Previously Presented) An apparatus according to Claim 42, wherein the processor is configured to receive a set of labels in response to effectuating logging in, logging in including the apparatus or user being prompted for at least one piece of identifying information, and sending the at least one piece of identifying information, the at least one piece of identifying information comprising a user name and a password associated with the user.

71. (Previously Presented) An apparatus according to Claim 48, wherein the at least one piece of identifying information sent by the processor is capable of identifying the apparatus or user to an organization independent of the authentication matrix associated with the respective apparatus or user.

72. (Previously Presented) A method according to Claim 51, wherein sending a set of labels comprises sending a set of labels in response to effectuating logging in, logging in including prompting the client for at least one piece of identifying information, and receiving the at least one piece of identifying information, the at least one piece of identifying information comprising a user name and a password associated with a client user.

73. (Previously Presented) A method according to Claim 57, wherein receiving at least one piece of identifying information comprises receiving at least one piece of identifying information capable of identifying the client to an organization independent of the authentication matrix associated with the client.

74. (Previously Presented) An apparatus comprising:
a processor configured to prompt a user for at least one piece of identifying information associated with the user, the user being prompted during effectuation of logging in,
wherein the processor is configured to receive the identifying information in response to prompting the user, wherein the processor receiving of the identifying information invokes an authentication procedure, the authentication procedure comprising:

selecting a set of labels identifying respective elements of an authentication matrix, wherein the authentication matrix includes a plurality of elements organized in one or more columns and rows each of which includes a respective header, each element being identifiable by a label including a column header and row header that identifies the respective column and row of the element;

providing the selected set of labels to the user, the set of selected labels including the column headers and row headers of the respective labels being unknown to the user until the set is provided;

receiving a passcode from the user in response to providing the set of labels, the passcode having been formulated based upon the elements identified by the provided set of labels; and

authenticating the user based upon the received passcode.

75. (Previously Presented) An apparatus according to Claim 74, wherein the processor is configured to prompt the user and receive the identifying information for each of a plurality of instances of logging in, and wherein the processor receiving of the identifying information for each instance invokes the authentication procedure such that the set of labels provided for the respective instance differs between the set of labels provided for each previous instance.

76. (Previously Presented) An apparatus according to Claim 75, wherein the processor receiving of the identifying information for each instance invokes the authentication procedure such that the received passcode is unique to the respective instance.

77. (Previously Presented) An apparatus according to Claim 74, wherein the processor is configured to receive at least one piece of identifying information such that the authentication procedure further comprises:

identifying, from the plurality of authentication matrices, the authentication matrix associated with the client being authenticated based upon the at least one piece of identifying information, the selected set of labels identifying elements of the identified authentication matrix.

78. (Previously Presented) An apparatus according to Claim 77, wherein the at least one piece of identifying information received by the processor is capable of identifying the client to an organization independent of the authentication matrix associated with the client.

79. (Previously Presented) An apparatus according to Claim 74, wherein the processor is configured to receive at least one piece of identifying information such that the authentication procedure includes receiving a passcode having been formulated further based upon a personal identification number (PIN) associated with the client.

80. (Previously Presented) An apparatus according to Claim 79, wherein the processor is configured to receive at least one piece of identifying information such that the authentication procedure includes receiving a passcode having been formulated including at least one element selected from the authentication matrix and the PIN in a predefined position with respect to the selected at least one element.

81. (Previously Presented) An apparatus according to Claim 74, wherein the identifying information received by the processor comprises a user name and a password associated with the user.

82. (Previously Presented) A method for authenticating a user comprising:
prompting a user for at least one piece of identifying information associated with the user, the user being prompted during effectuation of logging in; and
receiving the identifying information in response to prompting the user, wherein receiving of the identifying information invokes an authentication procedure, the authentication procedure comprising:

selecting a set of labels identifying respective elements of an authentication matrix, wherein the authentication matrix includes a plurality of elements organized in one or more columns and rows each of which includes a respective header, each element being identifiable by a label including a column header and row header that identifies the respective column and row of the element;

providing the selected set of labels to the user, the set of selected labels including the column headers and row headers of the respective labels being unknown to the user until the set is provided;

receiving a passcode from the user in response to providing the set of labels, the passcode having been formulated based upon the elements identified by the provided set of labels; and

authenticating the user based upon the received passcode.

83. (Previously Presented) A method according to Claim 82, wherein prompting the user and receiving the identifying information occur for each of a plurality of instances of logging in, and wherein the receiving of the identifying information for each instance invokes the authentication procedure such that the set of labels provided for the respective instance differs between the set of labels provided for each previous instance.

84. (Previously Presented) A method according to Claim 83, wherein the receiving of the identifying information for each instance invokes the authentication procedure such that the received passcode is unique to the respective instance.

85. (Previously Presented) A method according to Claim 82, wherein receiving at least one piece of identifying information comprises receiving at least one piece of identifying information such that the authentication procedure further comprises:

identifying, from the plurality of authentication matrices, the authentication matrix associated with the client being authenticated based upon the at least one piece of identifying information, the selected set of labels identifying elements of the identified authentication matrix.

86. (Previously Presented) A method according to Claim 85, wherein the received at least one piece of identifying information is capable of identifying the client to an organization independent of the authentication matrix associated with the client.

87. (Previously Presented) A method according to Claim 82, wherein receiving at least one piece of identifying information comprises receiving at least one piece of identifying information at least one piece of identifying information such that the authentication procedure includes receiving a passcode having been formulated further based upon a personal identification number (PIN) associated with the client.

88. (Previously Presented) A method according to Claim 87, wherein receiving at least one piece of identifying information comprises receiving at least one piece of identifying information such that the authentication procedure includes receiving a passcode having been formulated including at least one element selected from the authentication matrix and the PIN in a predefined position with respect to the selected at least one element.

89. (Previously Presented) A method according to Claim 82, wherein prompting a user comprises prompting a user for identifying information comprising a user name and a password associated with the user.

90. (Previously Presented) A computer program product for authenticating a user, the computer program product comprising at least one computer-readable storage medium having computer-readable program code portions stored therein, the computer-readable program code portions comprising:

- a first executable portion configured to prompt a user for at least one piece of identifying information associated with the user, the user being prompted during effectuation of logging in; and

- a second executable portion configured to receive the identifying information in response to prompting the user, wherein the second executable portion receiving of the identifying information invokes an authentication procedure, the authentication procedure comprising:

- selecting a set of labels identifying respective elements of an authentication matrix, wherein the authentication matrix includes a plurality of elements organized in one or more columns and rows each of which includes a respective header, each element being identifiable by a label including a column header and row header that identifies the respective column and row of the element;

- providing the selected set of labels to the user, the set of selected labels including the column headers and row headers of the respective labels being unknown to the user until the set is provided;

receiving a passcode from the user in response to providing the set of labels, the passcode having been formulated based upon the elements identified by the provided set of labels; and

authenticating the user based upon the received passcode.

91. (Previously Presented) A computer program product according to Claim 90, wherein the first and second executable portions are configured to prompt the user and receive the identifying information for each of a plurality of instances of logging in, and wherein the second executable portion receiving of the identifying information for each instance invokes the authentication procedure such that the set of labels provided for the respective instance differs between the set of labels provided for each previous instance.

92. (Previously Presented) A computer program product according to Claim 91, wherein the second executable portion receiving of the identifying information for each instance invokes the authentication procedure such that the received passcode is unique to the respective instance.

93. (Previously Presented) A computer program product according to Claim 90, wherein the second executable portion is configured to receive at least one piece of identifying information such that the authentication procedure further comprises:

identifying, from the plurality of authentication matrices, the authentication matrix associated with the client being authenticated based upon the at least one piece of identifying information, the selected set of labels identifying elements of the identified authentication matrix.

94. (Previously Presented) A computer program product according to Claim 93, wherein the at least one piece of identifying information received by the second executable portion is capable of identifying the client to an organization independent of the authentication matrix associated with the client.

95. (Previously Presented) A computer program product according to Claim 90, wherein the second executable portion is configured to receive at least one piece of identifying information such that the authentication procedure includes receiving a passcode having been formulated further based upon a personal identification number (PIN) associated with the client.

96. (Previously Presented) A computer program product according to Claim 95, wherein the second executable portion is configured to receive at least one piece of identifying information such that the authentication procedure includes receiving a passcode having been formulated including at least one element selected from the authentication matrix and the PIN in a predefined position with respect to the selected at least one element.

97. (Previously Presented) A computer program product according to Claim 90, wherein the first executable portion is configured to prompt a user for identifying information comprising a user name and a password associated with the user.

9. ***Evidence Appendix.***

None.

10. ***Related Proceedings Appendix.***

None.

CONCLUSION

For at least the foregoing reasons, Appellant respectfully requests that the rejections be reversed.

Respectfully submitted,



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